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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/544,253	04/05/2000	Gopal Parupudi	MSI-505US	7033

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LEE & HAYES PLLC
421 W RIVERSIDE AVENUE SUITE 500
SPOKANE, WA 99201

EXAMINER	
LY, ANH	

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/544,253	PARUPUDI ET AL.	
	Examiner	Art Unit	
	Anh Ly	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-64* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-64* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 April 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/24/05, 12/20/04*. 09/21/04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is response to Applicants' response filed on 12/04/2004.

2. Claims 1-8 and 10-64 are pending in this application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 24-26, 37-29, 48, 54-56, 57, 58-59, 60-61 and 62-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,581,062 issued to Draper et al. (hereinafter Draper) in view of US Patent No. 6,466,918 issued to Spiegel et al. (hereinafter Spiegel).

With respect to claim 1, Draper teaches one or more computer-readable media (mass storage devices: col. 7, lines 60-63 and see fig. 13); and

a hierarchical tree structure resident on the media and comprising multiple nodes each of which represent geographical divisions of the Earth (locations such as name, home, address, state, zip city: col. 5, lines 38-55 and see fig. 6a and fig. 6b), individual nodes comprising an entity identification (EID), that is unique to the node (each node has its own entity such as the node name, its entity is NAME: col. 5, lines 38-55 and col. 6, lines 40-56), said multiple nodes comprising parent and children nodes, at least some of the parent nodes and their associated children nodes having EIDs that are unique for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data

information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, or locations (geographical locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity identification (EID), that is unique to the node, each node has its own entity such as the node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent nodes and child nodes and their associated children nodes having EIDs that are unique for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67). Draper does not clearly teach EIDs serving as a basis by which attributes can be assigned to goods or services associated with an individual node.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claim 24, Draper teaches one or more computer-readable media (mass storage devices: col. 7, lines 60-63 and see fig. 13);

a first hierarchical tree structure having multiple nodes associated with a is first context (see fig. 6b, the first hierarchical tree structure including nodes: directory and Person);

at least one-second hierarchical tree structure having multiple nodes associated with a second context (see fig. 6B, the second hierarchical tree structure including nodes: Person and its children nodes such as Name Home and Work: see fig. 6b)

and at least one node from the at least one second hierarchical tree structure being linked with one node on the: first hierarchical tree structure by a link that is configured to enable a complete context to be derived from the first and second contexts (col. 5, lines 38-55 and col. 6, lines 40-56; the linking between two hierarchical tree structures is the link or edge between Directory and Person, see fig. 6b).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, or locations (geographical locations): name, home, address, state, zip

city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity identification (EID), that is unique to the node, each node has its own entity such as the node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent nodes and child nodes and their associated children nodes having EIDs that are unique for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67). Draper does not clearly teach IDs that can be serve as a basis by which attributes can be assigned to goods or services associated with an individual node.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claims 25-26, Draper teaches a location context and geographical divisions of Earth (see fig. 6B: address, city state).

With respect to claim 37, Draper teaches accessing first and one or more second hierarchical tree structures that are resident on one or more computer-readable media, each tree structure having multiple nodes, the nodes of the first hierarchical tree structure being associated with a first context, the nodes of the one or more second hierarchical tree structures being associated with a second context; and traversing multiple nodes of at least one of the tree structures to derive a context, said multiple nodes comprising parent and children nodes at least some of the parent nodes and their associated children nodes having Ids that are unique for the associated node (mass storage devices: col. 7, lines 60-63 and see fig. 13; see fig. 6B, see fig. 6b, the first hierarchical tree structure including nodes: directory and Person and the second hierarchical tree structure including nodes: Person and its children nodes such as Name Home and Work; col. 5, lines 38-55 and col. 6, lines 40-56; the linking between two hierarchical tree structures is the link or edge between Directory and Person, see fig. 6b; and traversing the multiple nodes: see fig. 5, col. col. 5, lines 1-12).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as

services, goods, or locations (geographical locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity identification (EID), that is unique to the node, each node has its own entity such as the node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent nodes and child nodes and their associated children nodes having EIDs that are unique for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67). Draper does not clearly teach individual nodes having unique IDs that can be serve as a basis by which attributes can be assigned to goods or services associated with an individual node.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claims 38-39, Draper teaches a location context and geographical divisions of Earth (see fig. 6B: address, city state).

With respect to claim 48, Draper teaches access first and second hierarchical tree structures, each tree structure having multiple nodes, the nodes of the first hierarchical tree structure being associated with a first location context, the nodes of the second hierarchical tree structure being associated with a second location context, at least one node of the second hierarchical tree structure being linked with a node of the first hierarchical tree structure; and traverse at least one node of each tree structure to derive a location context, at least one node in a traversal path that leads to a root node of the second hierarchical tree structure being 'linked with a node of the first hierarchical tree structure, said multiple nodes comprising parent and children nodes at least some of the parent nodes and their associated children nodes having Ids that are unique for the associated node (mass storage devices: col. 7, lines 60-63 and see fig. 13; see fig. 6B, see fig. 6b, the first hierarchical tree structure including nodes: directory and Person and the second hierarchical tree structure including nodes: Person and its children nodes such as Name Home and Work; col. 5, lines 38-55 and col. 6, lines 40-56; the linking between two hierarchical tree structures is the link or edge between Directory and Person, see fig. 6b; and traversing the multiple nodes: see fig. 5, col. col. 5, lines 1-12).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the

nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, or locations (geographical locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity identification (EID), that is unique to the node, each node has its own entity such as the node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent nodes and child nodes and their associated children nodes having EIDs that are unique for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67). Draper does not clearly teach individual nodes having unique IDs that can be serve as a basis by which attributes can be assigned to goods or services associated with an individual node.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would

incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claim 49, Draper teaches the computing device automatically determines its location context (see fig. 6b, col. 5, lines 38-55).

With respect to claim 54, Draper teaches defining a hierarchical tree structure comprising multiple nodes that each can define a physical or logical entity; said multiple nodes comprising parent and children nodes, at least some of the parent nodes and their associated children nodes (see fig. 2B or 6b, each hierarchical tree structure has more than one nodes and the node such as phone, address or work are represented as services node; and traversing the multiple nodes: see fig. 5, col. col. 5, lines 1-12).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, or locations (geographical locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity

identification (EID), that is unique to the node, each node has its own entity such as the node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent nodes and child nodes and their associated children nodes having EIDs that are unique for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67). Draper does not clearly teach having Ids that are unique for the associated node; associating one or more goods or services with one or more of the nodes; and traversing one or more of the multiple nodes to discover a good or service.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claim 55-56, Draper teaches location, geographical division of the Earth and traversing enables a current location to be determined (col. 5, lines 38-55 and col. 5, lines 1-14).

With respect to claim 57, Draper teaches define a hierarchical tree structure comprising multiple nodes that each can define a physical or logical entity; said multiple nodes comprising parent and children nodes, at least some of the parent nodes and their associated children nodes (see fig. 2B or 6b, each hierarchical tree structure has more than one nodes and the node such as phone, address or work are represented as services node; and traversing the multiple nodes: see fig. 5, col. col. 5, lines 1-12).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, or locations (geographical locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity identification (EID), that is unique to the node, each node has its own entity such as the node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent nodes and child nodes and their associated children nodes having EIDs that are unique

for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67). Draper does not clearly teach having Ids that are unique for the associated node; associating one or more goods or services with one or more of the nodes; and traversing one or more of the multiple nodes to discover a good or service.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claim 58, Draper teaches receiving input from a source that specifies information pertaining to physical and/or logical entities; processing the information to define a hierarchical tree structure having a context, the tree structure comprising multiple nodes each of which represent a separate physical or logical entity; linking at least one of the multiple nodes to a node of another tree structure having a

context and multiple nodes that represent physical and/or logical entities, the tree structures being configured for traversal in a manner that enables context to be derived from one or more of the nodes (see fig. 2B or 6b, each hierarchical tree structure has more than one nodes and the node such as phone, address or work are represented as services node; and traversing the multiple nodes: see fig. 5, col. col. 5, lines 1-12; parent and children: col. 4, lines 10-28 and lines 42-67).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, or locations (geographical locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity identification (EID), that is unique to the node, each node has its own entity such as the node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent nodes and child nodes and their associated children nodes having EIDs that are unique for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67). Draper does not

clearly teach individual nodes having unique IDs that can serve as a basis by which attributes can be assigned to goods or services.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claim 59, Draper teaches location context (see fig. 6b, state, city, address, col. 5, lines 38-55).

Claim 60 is essentially the same as claim 58 except that it is directed to a computer-readable media rather than a method, and is rejected for the same reason as applied to the claim 58 hereinabove.

With respect to claim 61, Draper teaches one or more computer-readable media; and a hierarchical tree structure resident on the media and comprising multiple nodes each of which represent geographical divisions of the Earth, individual nodes

comprising an entity identification (EID) that is unique to the node, said multiple nodes comprising parent and children nodes, at least some of the parent nodes and their associated children nodes having EIDs that are unique for the associated node (mass storage devices: col. 7, lines 60-63 and see fig. 13); locations such as name, home, address, state, zip city: col. 5, lines 38-55 and see fig. 6a and fig. 6b; each node has its own entity such as the node name, its entity is NAME: col. 5, lines 38-55 and col. 6, lines 40-56; and see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, or locations (geographical locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity identification (EID), that is unique to the node, each node has its own entity such as the node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent nodes and child nodes and their associated children nodes having EIDs that are unique for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H,

and each node has its own entity identification: col. 4, lines 10-67). Draper does not clearly teach IDs serving as a basis by which attributes can be assigned to goods or services associated with an individual node.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claim 62, Draper teaches one or more computer-readable media; a first hierarchical tree structure having multiple nodes associated with a first context; at least one second hierarchical tree structure having multiple nodes associated with a second context; and at least one node from the at least one second hierarchical tree structure being linked with one node on the first hierarchical tree structure by a link that is configured to enable a complete context to be derived from the first and second contexts, individual nodes having unique IDs that can serve as a basis by which

attributes can be assigned to goods or services; and wherein the nodes of the first hierarchical tree structure comprise geographical divisions of the Earth , wherein the first and the at least one second hierarchical tree structures comprises a plurality of attributes, one of which comprising information that pertains to the tree with which the node is associated (see fig. 2B or 6b, each hierarchical tree structure has more than one nodes and the node such as phone, address or work are represented as services node; and traversing the multiple nodes: see fig. 5, col. col. 5, lines 1-12; parent and children: col. 4, lines 10-28 and lines 42-67; city state are geographical divisions: see fig. 6b).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, or locations (geographical locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity identification (EID), that is unique to the node, each node has its own entity such as the node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent nodes and child nodes and their associated children nodes having EIDs that are unique

for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67). Draper does not clearly teach IDs individual nodes having unique IDs that can serve as a basis by which attributes can be assigned to goods or services.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claim 63, Draper teaches accessing first and one or more second hierarchical tree structures that are a resident on one or more computer-readable media, each tree structure having multiple nodes, the nodes of the first hierarchical tree structure being associated with a first context, the nodes of the one or more second hierarchical tree structures being associated with a second context; and traversing multiple nodes of at least one of the tree structures to derive a context, individual nodes

having unique IDs that can serve as a basis by which attributes can be assigned to goods or services; wherein the nodes of the first hierarchical tree comprise geographical divisions of the Earth; and wherein the traversing comprises traversing at least one node on each tree to derive the context; wherein the first and the at least one second hierarchical tree structures comprises a plurality of attributes, one of which comprising information that pertains to the tree with which the node is associated (see fig. 2B or 6b, each hierarchical tree structure has more than one nodes and the node such as phone, address or work are represented as services node; and traversing the multiple nodes: see fig. 5, col. col. 5, lines 1-12; parent and children: col. 4, lines 10-28 and lines 42-67; city state are geographical divisions: see fig. 6b).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, or locations (geographical locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity identification (EID), that is unique to the node, each node has its own entity such as the node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent

nodes and child nodes and their associated children nodes having EIDs that are unique for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67). Draper does not clearly teach individual nodes having unique IDs that can serve as a basis by which attributes can be assigned to goods or services.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claim 64, Draper teaches access first and second hierarchical tree structures, each tree structure having multiple nodes, the nodes of the first hierarchical tree structure being associated with a first location context, the nodes of the second hierarchical tree structure being associated with a second location context, at least one node of the a second hierarchical tree structure being linked with a node of

the first hierarchical tree structure: and traverse at least one node of each tree structure to derive a location context, at least one node in a traversal path that leads to a root node of the second hierarchical tree structure being linked with a node of the first hierarchical tree structure, wherein the first and the at least one second hierarchical tree structures comprises a plurality of attributes, one of which comprising information that pertains to the tree with which the node is associated; and wherein the traversing comprises traversing at least one node on each tree to derive the context (see fig. 2B or 6b, each hierarchical tree structure has more than one nodes and the node such as phone, address or work are represented as services node; and traversing the multiple nodes: see fig. 5, col. col. 5, lines 1-12; parent and children: col. 4, lines 10-28 and lines 42-67; city state are geographical divisions: see fig. 6b).

Draper teaches the entities/instantiations have an hierarchical relationship to each other and may be logically represented by tree structure having corresponding number of nodes, one for each entity/instantiation and the edges interconnecting the nodes whose represented entities/instantiations are links (see figs. 2a-2b and also figs. 6a -6b; 3, lines 62-67 and col. 6, lines 1-28; and col. 5, lines 38-55). Data or information of each entity is stored in node under structured organization and each entity has its own EID identifiers (see fig. 3 col. 4, lines 28-42), and nodes may be stored data information associated with the entity and its attributes (col. 5, lines 12-36), such as services, goods, or locations (geographical locations): name, home, address, state, zip city (col. 5, lines 38-55 and see fig. 6a and fig. 6b); individual nodes comprising an entity identification (EID), that is unique to the node, each node has its own entity such as the

node name, its entity is NAME (col. 5, lines 38-55 and col. 6, lines 40-56) and parent nodes and child nodes and their associated children nodes having EIDs that are unique for the associated node (see fig. 2b, entity A has more than one nodes, B, E, G and H, and each node has its own entity identification: col. 4, lines 10-67). Draper does not clearly teach individual nodes having unique IDs that can serve as a basis by which attributes can be assigned to goods or services.

However, Spiegel teaches context tree, which is a hierarchical tree structure (see fig. 1B) including one or more node objects and each node object can be assigned to goods or services node as context node with attribute of goods or services (col.1, lines 35-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper with the teachings of Spiegel, wherein a hierarchical tree structure including nodes with entity identification for unique to that node in the system provided therein (Draper's fig. 2), would incorporate the use of context tree including nodes and each node is assigned to the goods, or service to the consumers or users by browsing trees (col. 1, lines 35-55 and fig. 1B). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

6. Claims 2-19, 27-28, 30-31 and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,581,062 issued to Draper et al. (hereinafter Draper) in view of US Patent No. 6,466,918 issued to Spiegel et al. (hereinafter Spiegel) and further in view of US Patent No. 5,295,261 issued to Simonetti.

With respect to claims 2-19, Draper in view of Spiegel teaches a system as discussed in claim 1.

Draper and Spiegel disclose substantially the invention as claimed.

Draper and Spiegel do not teach one or more network, political or nature entities, ocean, infrastructure entities, time zones, public places, non-physical entities.

However, Simonetti teaches one or more networks; wherein the nodes comprise political or natural entities, wherein the political or natural entities comprises one or more of the following: continents, countries, oceans, states, counties and cities; wherein the nodes comprise infrastructure entities; one or more of the following: postal codes, area codes and time zones; public places and non-physical entities (storing geographical information database: col. 4, lines 6-14; see abstract, col. 1, lines 60-68; col. 4, lines 6-14 and col. 8, lines 12-26; also see col. 13, lines 27-44; col. 8, lines 12-26; and abstract, figs, 3(A), 3(B) and 3(C), col. 8, lines 12-35 and col. 9, lines 1-28); wherein one of the attributes comprises a name attribute; a neutral ground truth name attribute; wherein one of the attributes comprises a geographic attribute; a latitude/longitude attribute; a relative importance index; a contextual parent attribute; a source attribute; a start/end dates attribute; a modification date attribute and a status attribute (col. 1, lines

60-68; col. 4, lines 6-14 and col. 8, lines 12-26; also see col. 13, lines 27-44; col. 8, lines 12-26; and abstract, figs, 3(A), 3(B) and 3(C), col. 8, lines 12-35 and col. 9, lines 1-28).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper in view of Spiegel with the teachings of Simonetti by incorporating the use of networks and nodes with infrastructure entities and geographical information database. The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claims 28-28 and 30-31, Draper in view of Spiegel teaches a system as discussed in claim 24.

Draper and Spiegel disclose substantially the invention as claimed.

Draper and Spiegel do not teach physical and/or logical entities, attributes.

However, Simonetti teaches wherein the first and second contexts comprise a location context wherein the nodes of the first hierarchical tree structure comprise geographical divisions of the Earth; wherein the nodes of the at least one second hierarchical tree structure comprise physical and/or logical entities; wherein the first and the at least one second hierarchical tree structures comprise a plurality of attributes, two of which comprising: an identification that is unique to a node; and information that pertains to the tree with which the node is associated ; one or more goods or services associated with one or more of the nodes of the at least one second hierarchical tree structure and wherein the first hierarchical tree structure to comprises a standardized view of the Earth, and the at least one second hierarchical tree structure comprises an

organization-specific view of at least a portion of the Earth, the organization-specific view comprising a physical/logical entity that links into specific portions of the Earth (col. 1, lines 60-68; col. 4, lines 6-14 and col. 8, lines 12-26; also see col. 13, lines 27-44; col. 8, lines 12-26; and abstract, figs, 3(A), 3(B) and 3(C), col. 8, lines 12-35 and col. 9, lines 1-28).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper in view of Spiegel with the teachings of Simonetti by incorporating the use of the geographical information system such as state, city , country (col. 4, lines 10-14). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claims 40-43, Draper in view of Spiegel teaches a system as discussed in claim 37.

Draper and Spiegel disclose substantially the invention as claimed.

Draper and Spiegel do not teach physical and/or logical entities, attributes.

However, Simonetti wherein the traversing derives a location context; wherein the nodes of the first hierarchical tree comprise geographical divisions of the Earth; wherein the nodes of the one or more second hierarchical tree comprise physical and/or logical entities; wherein the traversing comprises traversing at least one node on each tree to derive the context; wherein the context comprises a location and wherein the first and one or more second hierarchical tree structures comprise at least one node pair 14 that is linked (col. 1, lines 60-68; col. 4, lines 6-14 and col. 8, lines 12-26; also see col.

13, lines 27-44; col. 8, lines 12-26; and abstract, figs, 3(A), 3(B) and 3(C), col. 8, lines 12-35 and col. 9, lines 1-28).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper in view of Spiegel with the teachings of Simonetti by incorporating the use of the geographical information system such as state, city , country (col. 4, lines 10-14). The motivation being to improve the tree structure without the need to generate and store search table for each search value.

7. Claims 20-23, 29, 32-36, 44-47 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over 6,581,062 issued to Draper et al. (hereinafter Draper) in view of US Patent No. 6,466,918 issued to Spiegel et al. (hereinafter Spiegel) and further in view of US Patent No. 6,151,601 issued to Papierniak et al. (hereinafter Papierniak).

With respect to claims 20-23, Draper in view of Spiegel teaches a system as discussed in claim 1.

Draper and Spiegel disclose substantially the invention as claimed.

Draper and Spiegel do not teach wherein the tree structure does not include any nodal associations with businesses or services; wherein the computer-readable media is embodied on a mobile computing device; wherein the computer-readable media is embodied on a handheld mobile computing device and wherein the computer-readable media is accessible to a mobile computing device via the Internet.

However, Papierniak teaches business context, wireless/mobile and Internet (abstract, col. 1, lines 10-40, col. 3, lines 56-67, col. 4, lines 1-67, col. 10, lines 8-67 and col. 11, lines 32-61).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper in view of Spiegel with the teachings of Papierniak by incorporating the use of a system having multiple hierarchical tree structures for storing data. The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claims 29, and 32-36, Draper in view of Spiegel teaches a system as discussed in claim 24.

Draper and Spiegel disclose substantially the invention as claimed.

Draper and Spiegel do not teach wherein the information comprises a universal resource locator (URL); wherein the organization-specific view has no context outside of the organization; wherein the computer-readable media is embodied on a mobile computing device; wherein the computer-readable media is embodied on a desktop device; wherein the computer-readable media is embodied a handheld mobile computing device; wherein the computer-readable media is accessible to a computing device via the Internet.

However, Papierniak teaches URL, wireless/mobile and Internet (col. 12, lines 61-67 and col. 13, lines 1-8; abstract, col. 1, lines 10-40, col. 3, lines 56-67, col. 4, lines 1-67, col. 10, lines 8-67 and col. 11, lines 32-61; col. 7, lines 55-67 and col. 8, lines 1-31).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper in view of Spiegel with the teachings of Papierniak by incorporating the use of a system having multiple hierarchical tree structures for storing data. The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claims 44-47, Draper in view of Spiegel teaches a system as discussed in claim 37.

Draper and Spiegel disclose substantially the invention as claimed.

Draper and Spiegel do not teach wherein at least one of the nodes of the one or more second hierarchical tree structures has a good or a service associated with it, and wherein the traversing comprises locating a good or a service associated with a node and consuming the good or service; wherein the accessing of the first and the one or more second hierarchical tree structures comprises accessing tree structures that are locally available on a mobile computing device; wherein the accessing of the first and the one or more second hierarchical tree structures comprises accessing at least one of the trees via a network medium; wherein the accessing of the first and the one or more second hierarchical tree structures comprises accessing at least one of the trees via the Internet.

However, Papierniak teaches business context, wireless/mobile and Internet (abstract, col. 1, lines 10-40, col. 3, lines 56-67, col. 4, lines 1-67, col. 10, lines 8-67 and col. 11, lines 32-61).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper in view of Spiegel with the teachings of Papierniak by incorporating the use of a system having multiple hierarchical tree structures for storing data. The motivation being to improve the tree structure without the need to generate and store search table for each search value.

With respect to claims 50-53, Draper in view of Spiegel teaches a system as discussed in claim 48.

Draper and Spiegel disclose substantially the invention as claimed.

Draper and Spiegel do not teach wherein the computing device automatically determines its location context; wherein the computing device is a handheld computing device; wherein the computing device is a mobile computing device; wherein the computing device is a desktop device; and wherein the computing device is a handheld computing device that automatically determines its location context.

However, Papierniak teaches business context, wireless/mobile and Internet (abstract, col. 1, lines 10-40, col. 3, lines 56-67, col. 4, lines 1-67, col. 10, lines 8-67 and col. 11, lines 32-61).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Draper in view of Spiegel with the teachings of Papierniak by incorporating the use of a system having multiple hierarchical tree structures for storing data. The motivation being to improve the tree structure without the need to generate and store search table for each search value.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Ly whose telephone number is (571) 272-4039 or via E-Mail: ANH.LY@USPTO.GOV **or fax to (571) 273-4039**. The examiner can normally be reached on TUESDAY – THURSDAY from 8:30 AM – 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene, can be reached on (571) 272-4107 or Primary Examiner Jean Corrielus (571) 272-4032.

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Any response to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, or faxed to: Central Fax Center (703) 872-9306

JEAN M. CORRIELUS
PRIMARY EXAMINER

ANH LY
APR. 6th, 2005